



NON-MICROGRAVITY PROVOCATIONS TO CREW - FOOD

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NASA FOOD SYSTEM GOALS AND OBJECTIVES

- Develop a food system that is Safe, Nutritious, **Acceptable**
and
- Efficiently balances appropriate vehicle resources:
volume, mass, waste, water, power, cooling, air, crew time

- Acceptability is often the lowest in priority in developing a NASA food system. While low food intake can be tolerated during short-term missions it poses a serious threat to health on longer-term missions.

- The crew will not receive required nutrition and will not perform their duties effectively.

- Trash, wet and dry, will increase.



ACCEPTABILITY IS IMPORTANT IN DEVELOPING A FOOD SYSTEM

- Anecdotal reports are that taste changes in microgravity
- Taste may change due to the excitement and stress resulting from an isolated environment
- Long term acceptability will change depending on flavor, texture, and complexity of food item.
 - Simple vs. intense flavors
 - Unfamiliar vs. familiar foods
 - Varied textures



SOCIALIZATION DURING MEALTIMES IS IMPORTANT FOR SPACE MISSIONS

- Many Shuttle crews will “host” the ISS crew to a special dinner
- Most ISS commanders insist on the crew eating at least one meal per day together
 - When isolated from the rest of the world in a space that, can be surprisingly alien, the preparing and eating of food can be the most communal and humanizing of domestic rituals.
 - The secret of the dinner table isn't what's placed on it, but who sits down with you



VARIETY IS IMPORTANT IN DEVELOPING A FOOD SYSTEM

- Food, on ISS, is stowed pantry style to allow the crew to “pick” their daily menu.
- Menu variety to mean a wide range of foods, a wide range of preparation methods, tastes and textures, as well as the element of choice for the diners.
 - Logistical limitations on the number of foods that can be carried will limit the number of foods stowed.
- Perceived variety is important because it can increase consumption (Rolls et al 1981; 1982).
- Greater variety may also simply increase the likelihood that a menu includes someone's favorite foods.

